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EXAMINER

TON, ANTHONY T

ART UNIT

PAPER NUMBER

2661

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7

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/703,027

Applicant(s)

BLACKMON ET AL.

Examiner

Anthony T Ton

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTIONS

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-10, 23, 24, 26-29, 34 and 35** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Oren et al.** (US Patent No. **5,844,887**), hereinafter referred to as Oren.

a) **In Regarding to Claim 1: Oren disclosed** a fabric switching system configured for distributing information packets from multiple sources to multiple destinations within a network (*see Fig. 5*), comprising:

a plurality of input and output facility interface circuit cards (*see port interface modules (PIMs) 50 and PIMs 51 in Fig. 5*); and

a plurality of line cards (*see junction modules (JM) 52 in Fig. 5*) different from said facility interface circuit cards, said line cards being configured to perform packet-forwarding functions (*see Fig.9; and col.3 lines 26-28 and 46-54*).

**Oren failed to explicitly disclose** wherein each of said facility interface circuit cards is connected to **one and only one** said line card. **However, Oren obviously disclosed** such an each of said facility interface circuit cards is connected to **one and only one** said line card since Oren disclosed **two** facility interface cards (*see PIMs 50 in Fig.5*) parallel coupled to **one and only one** said line card (*see JM 52 in Fig.5*) via a top input bus 90 and a bottom input bus 94, respectively (*see Fig.5*). Particularly, a routing tag that assigned by a PIM 50 to each multicast

cell input thereto, contains a bitmap of the output buses 92 and 96 (*see Fig.5*) for which the cell is intended, and in the first stage, when the cell is broadcast on an input bus (i.e. the top bus 90 or bottom bus 94, respectively), a JM 52 that couples to the PIM 50 examines two bits in the bitmap which correspond to left and right output buses 92 and 96, respectively (*see col.11 lines 23-30*). Hence, in this situation, it is obviously there is only one facility interface circuit card PIM 50 is connected to one and only one line card JM 52 as the claimed subject matter of the instant claim.

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such an each of said facility interface circuit cards is connected to **one and only one** said line card teaching in the instant claim with Oren. The motivation for doing so would have been to provide a faster processing in a packet/cell delivery network. Therefore, it would have been obvious to combine the instant claim and Oren the invention as specified in this claim 1.

**b) In Regarding to Claim 2:** Oren further disclosed the system of claim 1 wherein a redundant pair of said facility interface circuit cards is connected in parallel to each said line card, such that one **and only one** said line card is connected to each of said paired redundant interface circuit cards (*see Fig.5, col.3 lines 13-24 and see the connections in Fig.17*).

**c) In Regarding to Claim 3:** Oren further disclosed the system of claim 2 wherein said paired redundant interface circuit cards are configured to operate in a one-for-one protection mode (*see col.5 lines 50-53 and col.20 lines 48-51 for detecting a failure*).

**d) In Regarding to Claim 4:** Oren further disclosed the system of claim 1, further comprising a control processor located on said line card, wherein said control processor is

configured to control functions of said line card and of said facility interface circuit card connected to said line card (*see Junction Controller 70 in Fig. 9 for the control processor*).

**e) In Regarding to Claim 5: Oren further disclosed** the claimed limitations of Claims 1 and 2 are similar as that in the Claim 5 **except for** each of the input and output interface ports comprising two paired duplicate interface circuit cards. However, Oren also disclosed this limitation (*see two dual port interface controllers in Fig.8; these two would be considered as the two paired duplicate interface circuit cards of this claim*). Therefore, the rejections to Claims 1 and 2 and the rejection as explained of Oren herein would apply to the rejections on the Claim 5, in a communication network comprising a first system as taught.

**f) In Regarding to Claim 6: Oren further disclosed** the communication network of claim 5 wherein said first system is disposed in a folded configuration (*see Fig. 17, in which, interface cards 120 and 122 presenting for input interface cards, and interface cards 134 and 136 presenting for output interface cards; and wherein, these input and output interface cards are arranged to occupy in a same circuit board as shown in Fig.17. Therefore, Oren would disclose a folded configuration as the claimed limitation of the claim 6*), such that each of said paired duplicate interface circuit cards contains duplex input and output interface ports (*see bi-directional arrows shown in a port interface module in Fig.8*).

**g) In Regarding to Claim 7: Oren further disclosed** the communication network of claim 5 wherein said first system is disposed in a folded configuration, such that each of said line cards is configured to perform both input and output packet forwarding functions (*as the explanation in the Claim 6 for a folded configuration of the line cards; and see Fig.17, thereof the column fabric card 124, interface card 120, and connections between them. In this case, on*

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*row B data is transmitted from the interface card 120 (input) to the column fabric card 124 (output); on the other hand, on row D data is also transmitted from the card 124 (now it is input) to the card 120 (now it is output); also, see col.19 lines 60-65).*

**h) In Regarding to Claim 8: Oren disclosed** all aspects of this claim as set forth in claim 5.

**Oren did not explicitly disclose** the first system that comprises 320 input interface ports and 320 output interface ports. **However, Oren clearly disclosed** in his invention in 8 x 8 configuration, in 4 x 4 configuration, and in 16 x 16 configuration (*see col.7 lines 7-14*), or in any M x M configuration of a switching fabric (*see col.20 lines 28-30*).

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such 320 input interface ports and 320 output interface ports teaching in the instant claim with Oren because M not only is an integer, but it can be any number depending on a design choice of such input and output interface ports. The motivation for doing so would have been to make Oren be compatible with other input and output interface ports of other communications networks. Therefore, it would have been obvious to combine the instant claim and Oren the invention as specified in this claim.

**i) In Regarding to Claim 9: Oren further disclosed** the claimed limitations of Claim 5 are similar to that in the Claim 9, except for the second router system being interconnected with the first router system through duplicate data paths, such that each of said paired duplicate interface circuit cards of the first router system is interconnected to one of said paired duplicate interface circuit cards of said the second router system through one of said duplicate data paths. However, Oren also disclosed this limitation (*see interface cards 120, 122, 134 and 136 in*

*Fig.17; wherein, the two interface cards 120 and 122 present for each of paired duplicate interface circuit cards in the first system, and the two interface cards 134 and 136 present for each of paired duplicate interface circuit cards in the second system. And see the connection on row A and C in Fig.17 for interconnecting of these two systems together).* Therefore, the rejection to Claim 5 and the rejection as explained of Oren herein would apply to the rejections on the Claim 9, in a communication network comprising a first system and a second system as taught.

**j) In Regarding to Claim 10: Oren further disclosed** the claimed limitations of Claim 6 are similar as that in the Claim 10. Therefore, the rejections on Claim 6 of Oren would apply to the rejections to the Claim 10.

**k) In Regarding to Claim 23: Oren disclosed** a method of distributing data streams within a communication system containing a plurality of router systems, said method comprising:

receiving duplicate data streams at two-paired duplicate interface circuit cards of a first router system (*see "circles" on rows I and J in Fig. 17, which present receiving duplicate data streams at two-paired duplicate interface circuit cards on the interface cards 120 and 122, and col.19 lines 64-65);*

delivering said duplicate data streams from said **two paired** duplicate interface circuit cards to **one and only one** line card separate from said two paired duplicate interface circuit cards (*see "squares" in row E on the interface cards 120 and 122 in Fig.17, which present delivering the duplicate data streams from the duplicate interface circuit cards to a line card (i.e. the fabric card 124 in Fig.17); also, see Fig.5: two PIM cards 50 (one paired duplicate*

*interface circuit cards) coupled to a JM 52 card; and two PIM cards 51 (another paired duplicate interface circuit card) also coupled to the JM 52 card; and the JM card 52 is separated from the PIM cards 50 and 51. Hence, delivering said duplicate data streams from said two paired duplicate interface circuit cards to one and only one line card separate from said two paired duplicate interface circuit cards).*

examining said duplicate data streams in accordance with predetermined selection criteria (in Fig.8, Oren showed STS-3 devices, wherein, in SONET each STS-3/OC-3 (synchronous transport signal/optical signal) device communicating at a speed of 155.52 Mbps, and this would be considered as a predetermined selection criteria, see col.8 line 62 – col.9 line 1 for examining the duplicate data streams);

if one said duplicate data stream satisfies said criteria and the second said duplicate data stream does not satisfy said criteria, then selecting said duplicate data stream that satisfies said criteria and discarding said duplicate data stream that does not satisfy said criteria.

**Oren did not explicitly disclose** this claimed limitation. **However, Oren inherently disclosed** this claimed limitation because Oren disclosed when a failure is detected (*this implies that the duplicate data stream doesn't meet the predetermined selection criteria because the failure occurs*), the interface card is instructed to start transmitting the data stream on a redundant link (see col.20 lines 48-56 and Fig.17). And by this manner, the unsatisfied duplicate data stream (*caused by any internal failure*) would be automatically discarded without any further intervention required.

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such a claimed limitation teaching in the instant claim with Oren in order to choose a



valid data and get rid of the un-valid data (*caused by the internal failure*). The motivation for doing so would have been to make Oren' system more reliable. Therefore, it would have been obvious to combine the instant claim and Oren the invention as specified in this claim.

**Oren also failed to teach the following step:** if both of said duplicate data streams satisfy said criteria, then arbitrarily selecting one of said duplicate data streams and arbitrarily discarding the non-selected duplicate data stream. Even though Oren did not teach a method of arbitrarily selecting one of the duplicate data streams and arbitrarily discarding the non-selected duplicate data stream, it is just a default method of data selection, a software program can set such a default for arbitrary selection one of the duplicate data streams and arbitrary discarding the non-selected duplicate data stream.

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such a method teaching in the instant claim with Oren, so that any satisfied duplicate data stream can be chosen or discarded, either on a working or protecting link. The motivation for doing so would have been to process data streams faster. Therefore, it would have been obvious to combine the instant claim and Oren the invention as specified in this claim.

**l) In Regarding to Claim 24: Oren further disclosed** the method of claim 23 wherein said duplicate data streams are received through redundant data paths from a second router system within said communication system (*see "squares" on the interface card 136 that present sending data to column fabric card 132 (circles present receiving data) in Fig.17; and col.19 lines 64-65*);

**m) In Regarding to Claim 26: Oren further disclosed** the method of claim 23 wherein said examining, said selecting, and said discarding are performed at said line card (*see last*

*sentence in Abstract: "The addition of one spare fabric card provides the means to provide redundancy in the event one of the regularly operating fabric cards fails.").*

**n) In Regarding to Claim 27: Oren further disclosed** the method of claim 23, further comprising performing packet forwarding functions (*see col.3 lines 46-54*).

**o) In Regarding to Claim 28: Oren further disclosed** the method of claim 27 wherein said packet forwarding functions are performed at said line card (*as described in the Claim 26 above*).

**p) In Regarding to Claim 29: Oren further disclosed** the method of claim 23 wherein said distribution of data streams is not interrupted by an occurrence selected from the group consisting of malfunction, failure, removal, and replacement of one of said two paired duplicate interface circuit cards (*see the connections between interface cards 120, 122, 134 and 132, and fabric cards 124, 126, 130 and 132, and redundant fabric card 128 in Fig.17. Wherein, when one of the fabric cards fails, the redundant fabric card 128 receives all signals from each of the interface cards. Therefore, any failed card can be removed and replaced without any interruption. Also, see col.21 lines 3-5*).

**q) In Regarding to Claim 34: Oren further disclosed** the method of claim 24 wherein routing addresses across said communication network are not changed by an occurrence within said first router system selected from the group consisting of malfunction, failure, removal, and replacement of one of said two paired duplicate interface circuit cards, such that data rerouting and route-flap are prevented in said second router system and are not broadcast in part or as a whole across said communication network (*see the connections between interface cards 120, 122, 134 and 132, and fabric cards 124, 126, 130 and 132, and redundant fabric card 128 in*

*Fig.17. Wherein, when one of the fabric cards fails, the redundant fabric card 128 receives all signals from each of the interface cards. Therefore, any failed card can be removed and replaced without any interruption. Also, see col.21 lines 3-5 for route-flap i.e. rerouting messages continuously through a network; therefore, addresses across a communication network are not changed because data packets that transmitted through the redundant port has the same destination addresses).*

**r) In Regarding to Claim 35: Oren further disclosed** the method of claim 24 wherein an occurrence of a failure within said data paths interconnecting said first router system with said second router system is detected and corrected independently by each of said first router system and said second router system, such that control communication between said first router system and said second router system is not required (*see col.20 line 66 – col.21 line 5*).

3. **Claims 11-22, 32 and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Oren** (US Patent No. 5,844,887) in view of **Ramaswami et al.** (US Patent No. 6,597,826), hereinafter referred to as Ramaswami.

**a) In Regarding to Claim 11: Oren disclosed** all aspects of this claim as set forth in claim 5.

**Oren did not explicitly disclose** an optical switch located within the core of the system. **However,** Oren disclosed ATM switches that allocate bandwidth on demand, in addition, ATM does not specify any specific rates or physical media, allowing it to scale support a variety of user requirements (*see col.2 lines 2-8*). Oren also disclosed typical port interfaces include STS-3 (*SONET standard*) and DS-3 (*see col.1 lines 55-56*).

**Ramaswami explicitly disclosed** an optical cross-connect switching system and its corresponding method perform a bridging operation by splitting the incoming light signal into at least a first bridged light signal and a second bridged light signal. Light signals are routed through multiple switch fabrics, which provide redundancy in case of failure by switching within the switch fabric (*see abstract and Fig.12*). Oren also failed to teach an optical switch in his invention. However, Ramaswami clearly taught such an optical switch (*see 240 and 260 in Fig.12*).

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such optical cross-connect switching system as taught by Ramaswami with Oren, so that such an optical switch can be used to transmit and receive data packets in a high data rate. The motivation for doing so would have been to provide Oren more reliable in optical switching networks. Therefore, it would have been obvious to combine Ramaswami and Oren the invention as specified in this claim.

**b) In Regarding to Claims 12-22:** **In Claim 12:** the communication network of claim 11 wherein N is equal to M; **in Claim 13:** the communication network of claim 11 wherein N is not equal to M; **in Claim 14:** the communication network of claim 12 wherein N is greater than 10; **in Claim 15:** the communication network of claim 14 wherein N is greater than 40; **in Claim 16:** the communication network of claim 15 wherein N is greater than 60; **in Claim 17:** the communication network of claim 13 wherein N and M are each greater than 10; **in Claim 18:** the communication network of claim 17 wherein N and M are each greater than 40; **in Claim 19:** the communication network of claim 18 wherein N and M are each greater than 60; **in Claim 20:** the communication network of claim 11 wherein said first router system further comprises a

plurality of said optical switches; **in Claim 21**: the communication network of claim 9 wherein each of said duplicate data paths comprises an optical fiber; and **in Claim 22**: the communication network of claim 21 wherein each of said duplicate data paths comprises duplex optical fibers.

**Oren did not explicitly teach** such claimed limitations of Claims 12-22. **However**, the subject matters of the claimed limitations of the claims 12-22 are obvious.

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such subject matters of the claimed limitations teaching in these instant claims 12-22 with Oren as a design choice because the switching fabric configurations 4x4, 8x8, 16x16, and M x M of Oren as described in the claim 8 above. The motivation for doing so would have been to make Oren be compatible with other networks. Therefore, it would have been obvious to combine these instant claims and Oren the invention as specified in these claims 12-22.

c) **In Regarding to Claims 32 and 33**: **In Claim 32**: the method of claim 24 wherein said redundant data paths comprise optical fibers; and **in Claim 33**: the method of claim 32 wherein said redundant data paths comprise duplex optical fibers.

**Oren failed to teach** the redundant data paths that comprise duplex optical fibers.

**Ramaswami** clearly taught such optical fibers (*see boxes 240 and 260 in Fig.12*).

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such optical fibers as taught by Ramaswami with Oren, in order to increase bandwidth and avoid of electromagnetic interference. The motivation for doing so would have been to increase data transmission rates in optical switching networks. Therefore, it would have been obvious to combine Ramaswami and Oren the invention as specified in this claim.

4. **Claims 25, 30 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Oren** (US Patent No. **5,844,887**) in view of **Bromley et al.** (US Patent No. **6,658,021**), hereinafter referred to as Bromley.

a) **In Regarding to Claim 25:** **Oren further disclosed** the method of claim 23 wherein said predetermined selection criteria include criteria selected from the group consisting of a SONET standard (*see col.1 lines 55-56*), and an ETHERNET protocol (*see col.1 lines 48-50*).

**Oren failed to teach** a packet-over-SONET protocol.

**Bromley disclosed** such a packet-over-SONET protocol (*see col.6 lines 5-10*).

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such packet-over-SONET protocol as taught by Bromley with Oren, so that data packets can be used in a SONET. The motivation for doing so would have been to make Oren be operated properly in a SONET. Therefore, it would have been obvious to combine Bromley and Oren the invention as specified in this claim.

b) **In Regarding to Claims 30 and 31:** In Claim 30: The method of claim 23 wherein said received data streams comprise information packets encapsulated into frames; an in Claim 31: The method of claim 30, further comprising extracting said information packets from said frames after receiving said data packets and before delivering said data packets to said line card.

**Oren failed to teach** encapsulated and de-encapsulated packets.

**Bromley taught** such packets (*see col.1 lines 27-30*).

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such packets as taught by Bromley with Oren, in order to provide adaptation for such packets in another network. The motivation for doing so would have been to make Oren's

packets be transmitted faster and reduced errors. Therefore, it would have been obvious to combine Bromley and Oren the invention as specified in this claim.

### **Response to Arguments**

5. Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection.

### **REMARKS:**

#### **Claim Amendments**

In the remarks filed on **04/19/2004**, Applicants traversed the rejection of claims 1-35 that were originally pending in the application. Applicants have herein amended claims 1, 2, 5, and 23. The transversal is based on the references of Oren, Ramaswami and Brombley.

#### **Examiner's Objections**

The Examiner has agreed to withdraw objections.

#### **35 U.S.C. 102 Claim Rejections**

**Claims 1-7, 9, and 10** were rejected under 35 U.S.C. 102(b) as being anticipated by Oren et al. (U.S. Patent 5,844,887), and claims 1 and 2 were also rejected under 35 U.S.C. 102(b) as being anticipated by Lamberg et al. (U.S. Patent 6,408,000). The claims 1-7, 9, and 10 have been respectfully traversed by the Examiner, but these claims are moot in view of the new grounds of rejection.

**Claim 1** as amended herein recites among other things the limitation "...wherein each of said facility interface circuit cards is connected to one and only one said line card."

However, **Oren obviously disclosed** such an each of said facility interface circuit cards is connected to **one and only one** said line card since Oren disclosed **two** facility interface cards (*see PIMs 50 in Fig. 5*) parallel coupled to **one and only one** said line card (*see JM 52 in Fig. 5*) via a top input bus 90 and a bottom input bus 94, respectively (*see Fig. 5*). Particularly, a routing tag that assigned by a PIM 50 to each multicast cell input thereto, contains a bitmap of the output buses 92 and 96 (*see Fig. 5*) for which the cell is intended, and in the first stage, when the cell is broadcast on **an input bus** (i.e. the top bus 90 or bottom bus 94, respectively), a JM 52 that couples to the PIM 50 examines two bits in the bitmap which correspond to left and right output buses 92 and 96, respectively (*see col. 11 lines 23-30*). Hence, in this situation, it is obviously there is only one facility interface circuit card PIM 50 is connected to one and only one line card JM 52 as the claimed subject matter of the instant claim. **Therefore**, the rejection to the claim 1 is moot in view of the new ground of rejection as described above.

Similarly, the rejection to **claim 2** is moot in view of the new ground of rejection as described in claim 1 above.

**Claim 5** as amended herein recites the limitation "... **such that one and only one said line card is connected to each of said paired duplicate interface circuit cards.**" As described above in claim 1, the rejection to the claim 5 is moot in view of the new ground of rejection.

**Claims 2-4, 6-7, and 9-10** depend either directly or indirectly from independent claim 1 or claim 5, and accordingly inherit all of the limitations of their respective independent base claims. Since base claims 1 and 5 were amended but are not allowable, therefore, claims 2-4, 6-7, and 9-10 are also not allowable for the same reasons.



**35 U.S.C. 103 Rejections**

**A. Rejection as unpatentable over Oren**

**Claims 8, 23, 24, 26-29, 34, and 35** were rejected under 35 U.S.C. 103(a) as being unpatentable over Oren.

**Claim 23**, as amended herein, recites among other things the limitation: "delivering said duplicate data streams from said two paired duplicate interface circuit cards to one and only one line card separate from said two paired duplicate interface circuit cards." . However, Oren disclosed such a limitation (*see "squares" in row E on the interface cards 120 and 122 in Fig.17, which present delivering the duplicate data streams from the duplicate interface circuit cards to a line card (i.e. the fabric card 124 in Fig.17); also, see Fig.5: two PIM cards 50 (one paired duplicate interface circuit cards) coupled to a JM 52 card; and two PIM cards 51 (another paired duplicate interface circuit card) also coupled to the JM 52 card; and the JM card 52 is separated from the PIM cards 50 and 51. Hence, delivering said duplicate data streams from said two paired duplicate interface circuit cards to one and only one line card separate from said two paired duplicate interface circuit cards*). Therefore, the rejection to claim 23 is still maintained.

**Claims 8, 24, 26-29, 34, and 35** depend either directly or indirectly from independent base claims 5 or 23, and accordingly inherit all of the limitations of their respective independent base claims. Since base claims 5 or 23 were amended but are not allowable, therefore, claims 8, 24, 26-29, 34, and 35 are also not allowable for the same reasons.

**Regarding claim 8**, according to the Office Action dated on 02/02/04 paper 4, the claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over Oren et al. only. There was no a combination of Oren and Ramaswami as disclosed by the Applicant in the Remarks.

**B. Combination of Oren and Ramaswami**

**Claims 11-22, 32, and 33** were rejected under 35 U.S.C. 103(a) as being unpatentable over Oren in view of Ramaswami.

Claims 11-22, 32, and 33 depend either directly or indirectly from independent base claims 5 or 23, and accordingly inherit all of the limitations of their respective independent base claims. Since base claims 5 or 23 were amended but are not allowable, therefore, claims 11-22, 32, and 33 are also not allowable for the same reasons.

**C. Combination of Oren and Bromley**

**Claims 25, 30, and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Oren in view of Bromley.

Claims 25, 30, and 31 depend either directly or indirectly from independent base claim 23, and accordingly inherit all of the limitations of their respective independent base claim 23. Since the base claim 23 was amended but are not allowable, therefore, claims 25, 30, and 31 are also not allowable for the same reasons.

**Conclusion**

Based on the facts as described above, the claims 1-35 have been respectfully traversed and considered but are still moot in view of the new grounds of rejection.

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12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Examiner Information***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony T Ton whose telephone number is 703-305-8956. The examiner can normally be reached on M-F: 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Olms can be reached on 703-305-4703. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

ATT  
6/22/04

  
Phirin Sam